LARS CONTRACT REPORT 050984



# QUARTERLY PROGRESS REPORT

FOR

# LANDSAT-4 IMAGE DATA QUALITY ANALYSIS

FOR PERIOD INCLUDING

FEBRUARY 10 - MAY 9, 1984

NASA CONTRACT NAS5-26859

To: NATIONAL AERONAUTICS & SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
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## Introduction

This report covers research carried out on Landsat-4 data under NASA Contract NAS5-26859 for the period February 10 through May 9, 1984. The primary activity in this period was expansion of research on methods of estimating point-spread functions from image data. Planning for analysis activities for Landsat-5 data was accomplished.

## Problems

No data on contractual problems occurred during the period.

## Publications

A poster paper entitled "Multispectral Classification of Landsat-4 MSS and TM Data: A Comparison of Classification Schemes" was presented at the Landsat-D´ Launch Symposium, Santa Barbara, CA, February 27 - March 1, 1984.

## Recommendations

No recommendations are made in this report.

## Funds Expended

The funds expended in the project are reported periodically by the Purdue University Office of Contract and Grant Business Affairs to the sponsor on NASA Form 533M. These are issued monthly. Specific disclosure of funds expended in this report is not a policy of the University.

## Significant Results

In this quarter, research focused on methods for estimating point-spread functions from image data. Previous work focused on finding good step edges in the images. Currently, use of roads and structure in dark backgrounds (i.e., bridges) are under investigation as well as other smoothing methods for reducing noise in the estimated point-spread function.

The estimation of the two-dimensional PSF was also investigated using tomographic techniques. Reformatting software changes were implemented to handle new formats for Landsat-5 data. These changes will enable conversion of the new data to a format required for all analysis software at the Purdue/LARS Laboratory.

Other activities included planning for data quality analysis activities for Landsat-5 data.